

EIC 2800 SEARCH REPORT



STIC Database Tracking Number: 317019

To: HOANG-QUAN HO
Location: JEF-6C83
Art Unit: 2818
Tuesday, December 15, 2009

Case Serial Number: 10/524,610

From: SCOTT SEGAL
Location: EIC2800
JEF-4B55
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Search Notes

Re: Layer System Comprising a Silicon Layer and a Passivation Layer, Method for Production a Passivation Layer on a Silicon Layer and the Use of Said System and Method

Examiner Ho:

Attached are edited search results from the patent and NPL literature in STN. Databases searched included Chemical Abstracts, Derwent World Patent Index, Japan Patent Abstracts, Korean Patent Abstracts, and a little searching in CAS Registry.

While I tried several different search strategies, I was unable to find any citations that met the search requirements. I did included one Japanese Patent Abstract, but it is a stretch from the Claims.

If you would like more searching to be done on this case, or if you'd like to re-focus the search, please do not hesitate to contact me.

Respectfully,
Scott

Scott Segal
Searcher, STIC-EIC2800
JEF-4B55, 571-272-1314



EIC 2800 SEARCH REQUEST

317019



Today's Date DEC 10

Name Hoang - Quan Ho
AU/Org. 2818 Employee # 81339
Bld.&Rm.# Jef. 683 Phone 2-8711

Priority App. Filing Date 8-17-03
Case/App. # 10/524610
Format for Search Results
EMAIL ☒ PAPER ☐

If this is an Appeals case, check here ☐

Describe this invention in your own words _____

Synonyms _____

Additional Comments

Please submit completed form to your EIC.

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01/09

Searcher Scott Segal Date Completed 12/15/09
Phone 2-1314 Sources CA, Deswest, Japio, Kaapub

, Diane

JEC 10

3 170 19

STIC-EIC2800@uspto.gov

Date: Thursday, December 10, 2009 12:29 PM

To: Ho, Hoang-Quan T. (AU2818)

Cc: STIC-EIC2800

Subject: Confirmation Receipt: 2800 Search Request - 10524610

This is an automated email confirming that your 2800 Search Request has been received by STIC's EIC2800.

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RequesterName: **HO, HOANG-QUAN TRAN**Organization: **TC 2800**Art Unit: **2818**Employee Number: **81339**Office Location: **JEF-6C83**Phone Number: **(571)272-8711**Email: **hoangquan.ho@uspto.gov**

Request DetailAttachment: **No**Case/Application number: **10524610** PALMPriority App. Filing Date: **08/17/2003**Format for Search Results: **EMAIL**Board of Appeals Case?: **No**

Describe this invention in your own words.:

Two layer passivation which comprises a bottom inorganic composition layer and a top organic composition layer provided on top of an etched silicon layer.

Synonyms:

Additional Comments:

Please call the examiner for search inquiry techniques.

Request Date: **Thursday, December 10, 2009 12:29 PM**

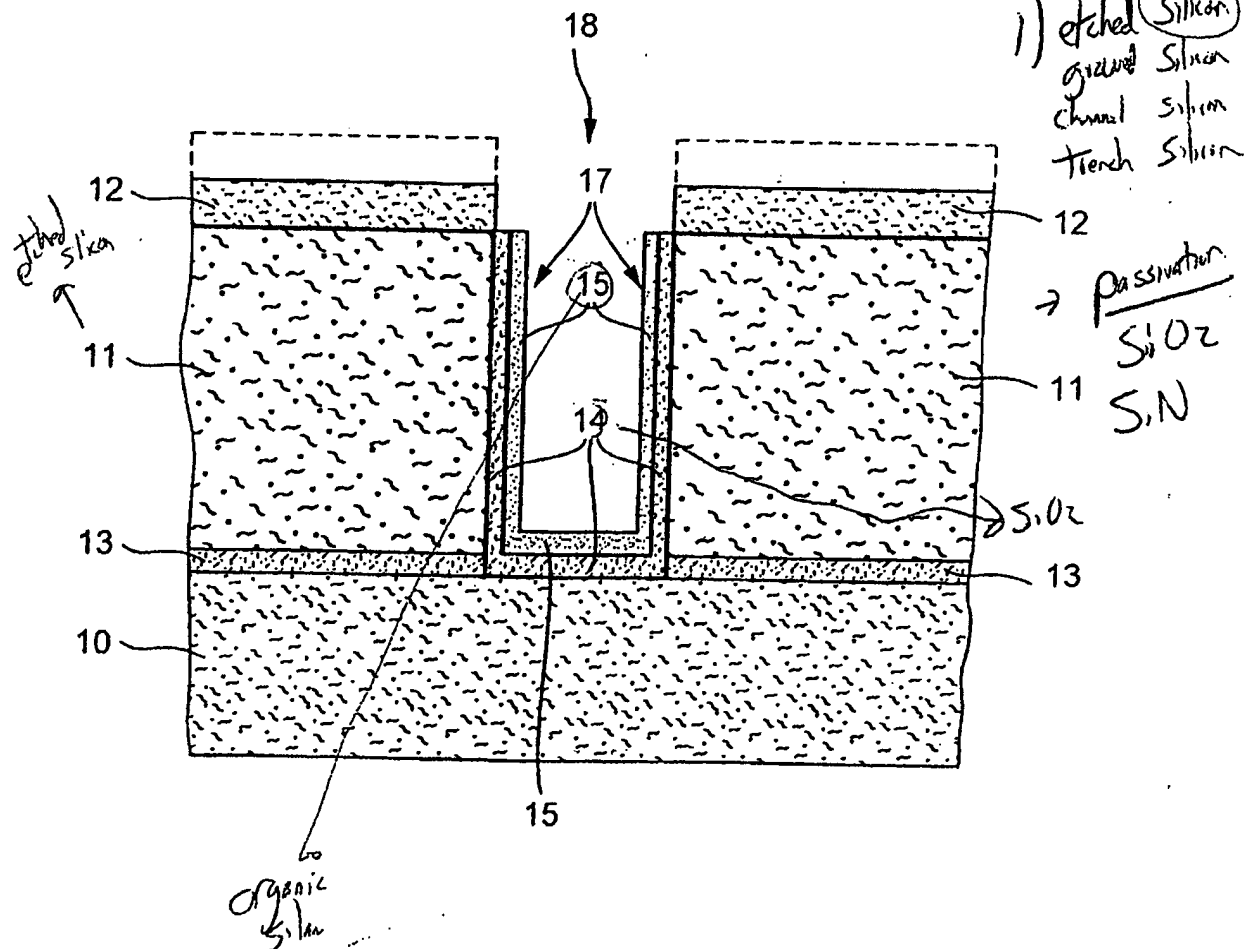
12/10/2009



US 20060108576A1

(19) **United States**(12) **Patent Application Publication**
Laermer et al.(10) Pub. No.: **US 2006/0108576 A1**(43) Pub. Date: **May 25, 2006**(54) **LAYER SYSTEM COMPRISING A SILICON LAYER AND A PASSIVATION LAYER, METHOD FOR PRODUCTION A PASSIVATION LAYER ON A SILICON LAYER AND THE USE OF SAID SYSTEM AND METHOD****Publication Classification**(51) Int. Cl. **H01L 29/08** (2006.01)
(52) U.S. Cl. **257/40**(76) Inventors: **Franz Laermer, Weil Der Stadt (DE); Lutz Mueller, Aichtal (DE); Winfried Bernhard, Gerlingen (DE)**Correspondence Address:
KENYON & KENYON LLP
ONE BROADWAY
NEW YORK, NY 10004 (US)(21) Appl. No.: **10/524,610**(22) PCT Filed: **May 6, 2003**(86) PCT No.: **PCT/DE03/01437**(30) **Foreign Application Priority Data****Aug. 17, 2003 (DE) 10237787.1**(57) **ABSTRACT**

A layer system is described including a silicon layer and a passivation layer which is applied at least regionally to the silicon layer's surface, the passivation layer having a first, at least largely inorganic partial layer and a second partial layer, the second partial layer being made of an organic compound including silicon or containing such a material. In particular, the second partial layer is structured in the form of a "self-assembled monolayer." Furthermore, a method is described for creating a passivation layer on a silicon layer, a first, inorganic partial layer being created on the silicon layer and a second partial layer, containing an organic compound including silicon or being made thereof, being created at least in certain areas on the first partial layer. Both partial layers form the passivation layer. The described layer system or the described method is particularly suited for creating self-supporting structures in silicon.



10/524,610

12/14/09

STN

Search Histories

13:45:54 ON 14 DEC 2009

14:25:35 ON 14 DEC 2009

FILE 'HCAPLUS, WPIX, JAPIO, KOREAPAT' ENTERED AT 13:46:08 ON 14 DEC 2009

L1 148602 SEA ABB=ON (MICROETCH? OR ETCH##### OR SPUTTER? OR ABLAT####
OR PIT#### OR ENGRAV##### OR ASH#### OR MICROMACHIN? OR CUT####
OR REMOV### OR MACHIN### OR PLANARIS##### OR PLANARIZ##### OR
POLISH#### OR CMP) (4A) (SILICON OR SI)

L2 35838 SEA ABB=ON (?TRENCH? OR CONCAVE OR CONCAVIT? OR HOLE OR
ORIFICE OR APERTURE OR SOCKET OR CAVIT### OR MICROCAVIT? OR
RECESS##### OR PIT OR MICROFIT OR DEPRESSION) (4A) (SILICON OR SI)

L3 8795 SEA ABB=ON (INDENT##### OR MICROINDENT? OR CRATER OR MICROCRAT
ER OR DIMPLE OR VOID OR OPENING OR MICROVOID OR SLOT OR SLIT) (4A) (SILICON OR SI)

L4 25238 SEA ABB=ON (THROUGH HOLE OR THROUGH HOLE OR THROUGH HOLE OR
CREVICE OR MICROCREVICE OR ?CHANNEL? OR ?GROOV? OR VALLEY OR
GULLEY OR FURROW### OR STI) (4A) (SILICON OR SI)

L5 198423 SEA ABB=ON (L1 OR L2 OR L3 OR L4)

L6 13458 SEA ABB=ON L5 AND (SIO2 OR SILICA OR SIOX) (3A) (?LAYER? OR
?COAT? OR ?FILM? OR ?SURFACE? OR LAMEL? OR ?LAMINAT? OR
OVERLAY? OR OVERLAID OR SHEET#### OR ?DEPOSIT? OR OVERSPREAD?
OR UNDERLY### OR OVERLY### OR OVERLIE# OR UNDERLIE# OR COVER?
OR LINER OR LINING OR LINED)

L7 28158 SEA ABB=ON L5 AND (SIO OR (SILICON OR SI) (W) (?OXIDE?)) (3A) (?LA
YER? OR ?COAT? OR ?FILM? OR ?SURFACE? OR LAMEL? OR ?LAMINAT?
OR OVERLAY? OR OVERLAID OR SHEET#### OR ?DEPOSIT? OR OVERSPREAD
? OR UNDERLY##### OR OVERLY##### OR OVERLIE# OR UNDERLIE# OR
COVER? OR LINER OR LINING OR LINED)

L8 6313 SEA ABB=ON L5 AND (GLASS## OR QUARTZ) (3A) (?LAYER? OR ?COAT?
OR ?FILM? OR ?SURFACE? OR LAMEL? OR ?LAMINAT? OR OVERLAY? OR
OVERLAID OR SHEET#### OR ?DEPOSIT? OR OVERSPREAD? OR UNDERLY###
OR OVERLY##### OR OVERLIE# OR UNDERLIE# OR COVER? OR LINER OR LINING OR LINED)

L9 42469 SEA ABB=ON (L6 OR L7 OR L8)

L10 11739 SEA ABB=ON (?TRENCH? OR OPENING OR HOLE) AND (SIO2 OR SILICA
OR SIOX) (3A) (?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE? OR
LAMEL? OR ?LAMINAT? OR OVERLAY? OR OVERLAID OR SHEET#### OR
?DEPOSIT? OR OVERSPREAD? OR UNDERLY### OR OVERLY### OR
OVERLIE# OR UNDERLIE# OR COVER? OR LINER OR LINING OR LINED)

L11 19022 SEA ABB=ON (?TRENCH? OR OPENING OR HOLE) AND ((SILICON OR
SI) (W) (?OXIDE?)) (3A) (?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE?
OR LAMEL? OR ?LAMINAT? OR OVERLAY? OR OVERLAID OR SHEET? OR
?DEPOSIT? OR OVERSPREAD? OR UNDERLY##### OR OVERLY##### OR
OVERLIE# OR UNDERLIE# OR COVER? OR LINER OR LINING OR LINED)

L12 28875 SEA ABB=ON (L10 OR L11)

L13 25052 SEA ABB=ON L12 AND (SILICON OR SI)

L14 14824 SEA ABB=ON L13 AND (ETCH? OR MICROETCH? OR CMP OR PLANARIZ?
OR PLANARIS? OR ABLAT##### OR PIT##### OR ASH## OR MICROMACHIN? OR CUT#####)

L15 48766 SEA ABB=ON L9 OR L14

L16 55759 SEA ABB=ON L9 OR L13

L17 5 SEA ABB=ON L16 AND (DYNASILAN? OR ?PERFLUORODECYLTRICHLOROSILA
NE? OR ?TRICHLOROPERFLUORODECYLSILANE? OR ?FLUOROTETRAHYDRODECY
LTRICHLOROSILANE? OR ?HEPTADECFLUORODECYLTRICHLOROSILANE? OR
?HEPTADECFLUORO? (8W) ?TETRAHYDROOCTYLTRICHLOROSILANE?)

L18 1 SEA ABB=ON L16 AND (?OCTYLTRICHLOROSILANE?) (10A) (?FLURO?)

L19 1 SEA ABB=ON L16 AND (?PERFLUOROCTYL?) (6A) (?TRICHLOROSILANE?)

L20 4 SEA ABB=ON L16 AND (?PERFLUORODECYLTRICHLOROSILANE?)

L21 7 SEA ABB=ON L16 AND (?TRICHLOROSILANE?) (10A) (?PERFLURO? OR ?FLURO?)

L22 0 SEA ABB=ON L16 AND (?HEPTADECFLUORODECYL?) (2A) (?SILANE?)

L23 139 SEA ABB=ON L16 AND (?FLURO? OR FLUORIN?) (12A) (?SILANE?)

L24 6 SEA ABB=ON L16 AND ((?PERFLUOROTETRAHYDRO?) (10A) (?CHLOROSILANE
? OR ?METHOXYSILANE? OR ?ETHOXYSILANE?) OR (?PERFLURO?) (10A) (?
CHLOROSILANE?) OR (?PERFLURO?) (10A) (?ETHOXYSILANE? OR
METHOXYSILANE? OR ?HEXYLTRICHLOROSILANE?))

L25 0 SEA ABB=ON L16 AND (?TETRAHYDROPERFLURO?) (6A) (?SILANE?)

L26 0 SEA ABB=ON L16 AND (?PEFLUORIN?) (10A) (?SILANE?)

L27 27 SEA ABB=ON L16 AND (?OXYSILANE?) (10A) (?PERFLURO? OR ?FLURO?)

L28 158 SEA ABB=ON L16 AND (?CHLORO?) (10A) (?SILANE?)

L29 5 SEA ABB=ON L16 AND (?CHLORINATED?) (5A) (?SILANE?)

L30 55 SEA ABB=ON L16 AND (?HEXYLTRICHLOROSILANE? OR ?DECYLTRICHLOROS
ILANE? OR ?TRIACETOXYSILANE? OR ?CYLTRIETHOXYSILANE? OR
?FLUROOCTYLTRICHLOROSILANE? OR ?FLUROCTYLTRICHLOROSILANE? OR

?XYLTRIMETHOXYSILANE? OR ?XYLTRIETHOXYSILANE?)

L31 1 SEA ABB=ON L16 AND (SICL3) (5A) (CF3)

L32 1 SEA ABB=ON L16 AND (CF3 (W) CF2) (10A) (SICL3)

L33 56 SEA ABB=ON L16 AND (?FLUOROSILANE? OR ?FLUORO SILANE?)

L34 9 SEA ABB=ON L16 AND (HALOGENATED) (5A) (?SILANE?)

L35 2 SEA ABB=ON L16 AND (?PERFLUORINAT?) (5A) (?SILANE?)

L36 0 SEA ABB=ON L16 AND (?PERFLUORINAT?) (5A) (POLYETHER) (5A) (?SILANE?)

L37 2 SEA ABB=ON L16 AND (?CHLOROFLUOROSILANE? OR ?CHLORO FLUORO
SILANE? OR ?CHLOROFLUORO SILANE? OR ?FLUOROCHLOROSILANE? OR
?FLUORO CHLORO SILANE? OR ?FLUOROCHLORO SILANE?)

L38 0 SEA ABB=ON L16 AND (SILANES) (L) (ALKYL) (3A) (CHLORO OR FLUORO)

L39 208 SEA ABB=ON L16 AND (?CHLORODIMETHYLSILANE? OR ?CHLOROMETHYLSIL
ANE? OR ?CHLORO DIMETHYLSILANE? OR ?TRICHLOROMETHYLSILANE? OR
?TRICHLOROCTADECYLSILANE? OR ?TRICHLOROSILANE? OR ?TRICHLOROV
NYSILANE? OR ?TRIETHOXYSILANE? OR ?CHLOROMETHYLSILANE?)

L40 104 SEA ABB=ON L16 AND (?FLUROMETHYLSILANE? OR ?TRIMETHOXYSILANE?
OR ?CHLOROCTAPHENYLSILANE?)

L41 101 SEA ABB=ON L16 AND (ORGANOSILANE OR ORGANO SILANE OR ORGANIC SILANE)

L42 598 SEA ABB=ON (L17 OR L18 OR L19 OR L20 OR L21 OR L22 OR L23 OR
L24 OR L25 OR L26 OR L27 OR L28 OR L29 OR L30 OR L31 OR L32 OR
L33 OR L34 OR L35 OR L36 OR L37 OR L38 OR L39 OR L40 OR L41)

L43 27 SEA ABB=ON L42 AND (PASSIVAT? OR PASSIF#####) (3A) (?LAYER?
OR ?COAT? OR ?FILM? OR ?SURFACE? OR LAMEL? OR ?LAMINAT? OR
OVERLAY? OR OVERLAID OR SHEET#### OR ?DEPOSIT? OR OVERSPREAD?
OR UNDERLY### OR OVERLY? OR OVERLIE# OR UNDERLIE# OR COVER? OR LINER OR LINING)

L44 45 SEA ABB=ON L42 AND (L04-C12)/MC

L45 194 SEA ABB=ON L42 AND (?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE?
OR LAMEL? OR ?LAMINAT? OR SHEET#### OR ?DEPOSIT? OR COVER? OR
LINER OR LINING) (3A) (FIRST OR 1ST OR INNER#### OR UNDER#### OR BOTTOM####)

L46 231 SEA ABB=ON L42 AND (?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE?
OR LAMEL? OR ?LAMINAT? OR SHEET#### OR ?DEPOSIT? OR COVER? OR
LINER OR LINING) (3A) (SECOND#### OR 2ND OR OUTER#### OR ABOVE OR
OVER#### OR ATOP OR TOP#### OR ADDITIONAL)

L47 154 SEA ABB=ON L45 AND L46

L48 200 SEA ABB=ON L42 AND (PLURAL### OR AT LEAST OR MORE THAN ONE OR
MULTIPLE OR MULTIPLIC? OR MULTI OR MULTITUDE OR 2ND OR SECOND
OR NUMEROUS) (3A) (?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE? OR
LAMEL? OR ?LAMINAT? OR SHEET#### OR ?DEPOSIT? OR COVER? OR LINER OR LINING)

L49 165 SEA ABB=ON L42 AND (LARGE NUMBER OR GREAT NUMBER OR MANY OR
SEVERAL OR TWO OR GREATER THAN OR DUAL OR 2 OR PAIR### OR
SET) (3A) (?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE? OR LAMEL? OR
?LAMINAT? OR SHEET#### OR ?DEPOSIT? OR COVER? OR LINER OR LINING)

L50 278 SEA ABB=ON (L48 OR L49)

L51 291 SEA ABB=ON L47 OR L50

L52 45 SEA ABB=ON L51 AND (L43 OR L44)

L53 52 SEA ABB=ON L51 AND (SIO2 OR SILICA OR SIOX OR SIO OR (SILICON
OR SI) (W) (?OXIDE?)) (5A) (INNER#### OR 1ST OR FIRST OR UNDER####
OR BOTTOM#### OR BELOW OR SIDEWALL### OR SIDE WALL### OR WALL)

L54 21 SEA ABB=ON L51 AND (INORGANIC OR INORG## OR PARTIAL) (3A) (?LAYE
R? OR ?FILM? OR ?COAT? OR ?DEPOSIT? OR ?SURFACE? OR ?LAMINAT?
OR LINER OR LINING OR COVER###)

L55 63 SEA ABB=ON L51 AND (SILICON OR SI) (3A) (ETCH#####)

L56 88 SEA ABB=ON L51 AND (H01L21-312 OR H01L21-316 OR H01L29-08)/IPC,IC

L57 0 SEA ABB=ON L51 AND (MICROMACHINE OR MICRO MACHINE)

L58 0 SEA ABB=ON L51 AND (MICROMECHANICAL DEVICES)

L59 5 SEA ABB=ON L51 AND (MICRO ELECTRO MECHANICAL OR MICROELECTROMECHANICAL? OR MEM OR MEMS)

L60 7 SEA ABB=ON L51 AND (POLYSILOXANES)

L61 9 SEA ABB=ON L51 AND (POLYSILOXANE)

L62 0 SEA ABB=ON L51 AND (CANTILEVERS)

L63 1 SEA ABB=ON L51 AND (?CANTILEVER?)

L64 11 SEA ABB=ON L51 AND (PASSIVATION)

L65 8 SEA ABB=ON L51 AND (SELF-ASSEMBLED MONOLAYERS)

L66 11 SEA ABB=ON L51 AND (SELF ASSEMBLED MONOLAYER)

L67 6 SEA ABB=ON L51 AND (SAM)

L68 7 SEA ABB=ON L51 AND (SELF-ASSEMBLY)

L69 22 SEA ABB=ON L51 AND (SELF ASSEMBL#####)

L70 200 SEA ABB=ON (L52 OR L53 OR L54 OR L55 OR L56 OR L57 OR L58 OR
L59 OR L60 OR L61 OR L62 OR L63 OR L64 OR L65 OR L66 OR L67 OR L68 OR L69)

L71 189 SEA ABB=ON L70 AND P/DT

L72 11 SEA ABB=ON L70 NOT L71

L73 4 SEA ABB=ON L72 NOT 2004-2010/PY

L74 121 SEA ABB=ON L71 AND 1980-2003/PRY,PY

L75 124 SEA ABB=ON L71 AND 2004-2009/PRY,PY

L76 65 SEA ABB=ON L71 NOT L75
L77 125 SEA ABB=ON L76 OR L74 OR L73
L78 124 SEA ABB=ON L77 NOT L63
D ALL MEMBB 1-124

10/524,610

12/15/09

STN

07:35:07 ON 15 DEC 2009

08:43:53 ON 15 DEC 2009

FILE 'HCAPLUS, WPIX, JAPIO, KOREAPAT' ENTERED AT 07:35:22 ON 15 DEC 2009

L1 762580 SEA ABB=ON (SILICON OR SI) (3A) (SUBSTRAT### OR WAFER OR CHIP OR MICROCHIP OR SLAB OR DIE OR ?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE? OR LAMEL? OR ?LAMINAT? OR OVERLAY? OR OVERLAID OR SHEET? OR ?DEPOSIT? OR OVERSPREAD? OR UNDERLY### OR OVERLY### OR OVERLIE# OR UNDERLIE# OR COVER?)

L2 106603 SEA ABB=ON L1 AND (MICROETCH? OR ETCH##### OR SPUTTER? OR ABLAT#### OR PIT#### OR ENGRAV#### OR ASH#### OR MICROMACHIN? OR CUT#### OR REMOV#### OR MACHIN#### OR PLANARIS##### OR PLANARIZ##### OR POLISH#### OR CMP) (4A) (SILICON OR SI)

L3 24952 SEA ABB=ON L1 AND (?TRENCH? OR CONCAVE OR CONCAVIT? OR HOLE OR ORIFICE OR APERTURE OR SOCKET OR CAVIT### OR MICROCAVIT? OR RECESS#####) (4A) (SILICON OR SI)

L4 6581 SEA ABB=ON L1 AND (INDENT##### OR MICROINDENT? OR VOID OR OPENING OR MICROVOID OR SLOT OR SLIT) (4A) (SILICON OR SI)

L5 17140 SEA ABB=ON L1 AND (THROUGH HOLE OR THROUGH HOLE OR THROUGH HOLE OR CREVICE OR MICROCREVICE OR ?CHANNEL? OR ?GROOV? OR VALLEY OR GULLEY OR FURROW### OR STI) (4A) (SILICON OR SI)

L6 50282 SEA ABB=ON L1 AND (ETCH#####) (3A) (SILICON OR SI)

L7 23334 SEA ABB=ON L1 AND (?TRENCH? OR VIA OR OPENING OR APERTURE OR HOLE) (3A) (SILICON OR SI)

L8 142601 SEA ABB=ON (L2 OR L3 OR L4 OR L5 OR L6 OR L7)

L9 11740 SEA ABB=ON L8 AND (SIO2 OR SILICA) (3A) (?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE? OR LAMEL? OR ?LAMINAT? OR OVERLAY? OR OVERLAID OR SHEET? OR ?DEPOSIT? OR OVERSPREAD? OR UNDERLY### OR OVERLY### OR OVERLIE# OR UNDERLIE# OR COVER? OR LINER OR LINING OR LINED)

L10 28483 SEA ABB=ON L8 AND (SIO OR (SILICON OR SI) (W) (?OXIDE?)) (3A) (?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE? OR LAMEL? OR ?LAMINAT? OR OVERLAY? OR OVERLAID OR SHEET? OR ?DEPOSIT? OR OVERSPREAD? OR UNDERLY### OR OVERLY### OR OVERLIE# OR UNDERLIE# OR COVER? OR LINER OR LINING OR LINED)

L11 421 SEA ABB=ON L8 AND (SIOX) (3A) (?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE? OR LAMEL? OR ?LAMINAT? OR OVERLAY? OR OVERLAID OR SHEET? OR ?DEPOSIT? OR OVERSPREAD? OR UNDERLY### OR OVERLY### OR OVERLIE# OR UNDERLIE# OR COVER? OR LINER OR LINING OR LINED)

L12 22229 SEA ABB=ON L8 AND (SIN OR SI3N4 OR (SILICON OR SI) (W) (NITRIDE)) (3A) (?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE? OR LAMEL? OR ?LAMINAT? OR OVERLAY? OR OVERLAID OR SHEET? OR ?DEPOSIT? OR OVERSPREAD? OR UNDERLY? OR OVERLY### OR OVERLIE# OR UNDERLIE# OR COVER? OR LINER OR LINING OR LINED)

L13 928 SEA ABB=ON L8 AND (INORGANIC OR INORG##) (3A) (?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE? OR LAMEL? OR ?LAMINAT? OR OVERLAY? OR OVERLAID OR SHEET? OR ?DEPOSIT? OR OVERSPREAD? OR UNDERLY### OR OVERLY### OR OVERLIE# OR UNDERLIE# OR COVER? OR LINER OR LINING OR LINED)

L14 49071 SEA ABB=ON (L9 OR L10 OR L11 OR L12 OR L13)

L15 1370 SEA ABB=ON L14 AND (POLYSILOXANE OR ?SILANE? OR (ORGANIC OR ORG##) (4A) (SILICON OR SI)) (5A) (?LAYER? OR ?COAT? OR ?FILM? OR ?DEPOSIT? OR ?LAMINAT? OR ?SURFACE? OR OVERLAY#### OR OVERLY### OR OVERSPREAD? OR COVER?)

L16 42 SEA ABB=ON L14 AND (POLYSILOXANE) (L) (?LAYER? OR ?FILM? OR ?COAT? OR ?DEPOSIT? OR ?LAMINAT? OR ?SURFACE? OR OVERLAY#### OR OVERLY### OR OVERSPREAD? OR COVER####)

L17 1380 SEA ABB=ON (L15 OR L16)

L18 3 SEA ABB=ON L14 AND (DYNASILAN? OR ?PERFLUORODECYLTRICHLOROSILANE? OR ?TRICHLOROPERFLUORODECYLSILANE? OR ?FLUOROTETRAHYDRODECYLTRICHLOROSILANE? OR ?HEPTADECALFLUORODECYLTRICHLOROSILANE? OR ?HEPTADECALFLUORO? (8W) ?TETRAHYDROOCTYLTRICHLOROSILANE?) (3A) (?LAYER? OR ?FILM? OR ?COAT?)

L19 12 SEA ABB=ON L14 AND (?HEXYLTRICHLOROSILANE? OR ?DECYLTRICHLOROSILANE? OR ?TRIACETOXYSILANE? OR ?CYLTRIETHOXSILANE? OR ?FLUOROOCYLTRICHLOROSILANE? OR ?FLUROCTYLTRICHLOROSILANE? OR ?XYLTRIMETHOXSILANE? OR ?XYLTRIETHOXSILANE?) (3A) (?LAYER? OR ?FILM? OR ?COAT?)

L20 0 SEA ABB=ON L14 AND (?CHLOROFLUOROSILANE? OR ?CHLORO FLUORO SILANE? OR ?CHLOROFLUORO SILANE? OR ?FLUOROCHLOROSILANE? OR ?FLUORO CHLORO SILANE? OR ?FLUOROCHLORO SILANE?) (3A) (?LAYER? OR ?COAT? OR ?SURFACE? OR ?FILM?)

L21 20 SEA ABB=ON L14 AND (?CHLORODIMETHYLSILANE? OR ?CHLOROMETHYLSILANE? OR ?CHLORO DIMETHYLSILANE? OR ?TRICHLOROMETHYLSILANE? OR

?TRICHLOROCTADECYLSILANE? OR ?TRICHLOROSILANE? OR ?TRIETHOXYSI
 LANE? OR ?CHLOROMETHYLSILANE?) (3A) (?COAT? OR ?FILM? OR ?SURFACE?)
 L22 1380 SEA ABB=ON (L15 OR L16 OR L17 OR L18 OR L19 OR L20 OR L21)
 L23 182 SEA ABB=ON L22 AND (SIO2 OR SILICA OR SIOX OR SIO OR (SILICON
 OR SI) (W) (?OXIDE?)) (5A) (INNER#### OR 1ST OR FIRST OR UNDER####
 OR BOTTOM#### OR BELOW OR SIDEWALL### OR SIDE WALL### OR WALL)
 L24 109 SEA ABB=ON L22 AND (SIN OR SI3N4 OR (SILICON OR SI) (W) (NITRIDE
) OR INORGANIC OR INORG##) (5A) (INNER#### OR 1ST OR FIRST OR
 UNDER#### OR BOTTOM#### OR BELOW OR SIDEWALL### OR SIDE WALL### OR WALL)
 L25 257 SEA ABB=ON (L23 OR L24)
 L26 61 SEA ABB=ON L22 AND (PLURAL### OR MORE THAN ONE OR MULTIPLE) (3A
) (?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE? OR LAMEL? OR
 ?LAMINAT? OR SHEET#### OR ?DEPOSIT? OR COVER? OR LINER OR LINING)
 L27 316 SEA ABB=ON L22 AND (SEVERAL OR TWO OR GREATER THAN ONE OR
 DUAL OR 2 OR PAIR### OR SET) (3A) (?LAYER? OR ?COAT? OR ?FILM?
 OR ?SURFACE? OR LAMEL? OR ?LAMINAT? OR SHEET#### OR ?DEPOSIT?
 OR COVER? OR LINER OR LINING)
 L28 27 SEA ABB=ON L26 AND L27
 L29 493 SEA ABB=ON L22 AND (?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE?
 OR LAMEL? OR ?LAMINAT? OR SHEET#### OR ?DEPOSIT? OR COVER? OR
 LINER OR LINING) (4A) (FIRST OR 1ST OR INNER#### OR UNDER#### OR BOTTOM####)
 L30 601 SEA ABB=ON L22 AND (?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE?
 OR LAMEL? OR ?LAMINAT? OR SHEET### OR ?DEPOSIT? OR COVER? OR
 LINER OR LINING) (4A) (SECOND### OR 2ND OR OUTER#### OR ABOVE OR
 OVER#### OR ATOP OR TOP#### OR ADDITIONAL)
 L31 384 SEA ABB=ON L29 AND L30
 L32 479 SEA ABB=ON L25 OR L28 OR L31
 L33 30 SEA ABB=ON L32 AND (PASSIVAT? OR PASSIF#####) (3A) (?LAYER?
 OR ?COAT? OR ?FILM? OR ?SURFACE? OR LAMEL? OR ?LAMINAT? OR
 OVERLAY? OR OVERLAID OR SHEET#### OR ?DEPOSIT? OR OVERSPREAD?
 OR UNDERLY### OR OVERLY? OR OVERLIE# OR UNDERLIE# OR COVER? OR LINER OR LINING)
 L34 333 SEA ABB=ON L32 AND (INSULAT##### OR DIELEC##### OR
 PROTECT?) (3A) (?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE? OR
 LAMEL? OR ?LAMINAT? OR OVERLAY? OR OVERLAID OR SHEET#### OR
 ?DEPOSIT? OR OVERSPREAD? OR UNDERLY### OR OVERLY? OR OVERLIE#
 OR UNDERLIE# OR COVER? OR LINER OR LINING)
 L35 165 SEA ABB=ON L32 AND (BARRIER OR PROTECT? OR PREVENT? OR
 CLAD#### OR BUFFER? OR BLOCK### OR ISOLAT####) (3A) (?LAYER? OR
 ?COAT? OR ?FILM? OR ?SURFACE? OR LAMEL? OR ?LAMINAT? OR
 OVERLAY? OR OVERLAID OR SHEET####)
 L36 68 SEA ABB=ON L32 AND (L04-C12)/MC
 L37 365 SEA ABB=ON (L33 OR L34 OR L35 OR L36)
 L38 103 SEA ABB=ON L37 AND (H01L21-312 OR H01L21-316 OR H01L29-08)/IPC, IC
 L39 0 SEA ABB=ON L37 AND (MICROMACHINE OR MICRO MACHINE)
 L40 3 SEA ABB=ON L37 AND (MICROMECHANICAL? OR MICRO MECHANICAL?)
 L41 0 SEA ABB=ON L37 AND (MICROMECHANICAL DEVICES)
 L42 4 SEA ABB=ON L37 AND (MICRO ELECTRO MECHANICAL OR MICROELECTROMECHANICAL? OR MEM OR MEMS)
 L43 1 SEA ABB=ON L37 AND (CANTILEVERS)
 L44 2 SEA ABB=ON L37 AND (?CANTILEVER?)
 L45 28 SEA ABB=ON L37 AND (PASSIVATION)
 L46 1 SEA ABB=ON L37 AND (SELF-ASSEMBLED MONOLAYERS)
 L47 1 SEA ABB=ON L37 AND (SELF ASSEMBLED MONOLAYER)
 L48 0 SEA ABB=ON L37 AND (SAM)
 L49 0 SEA ABB=ON L37 AND (SELF-ASSEMBLY)
 L50 1 SEA ABB=ON L37 AND (SELF ASSEMBL#####)
 L51 129 SEA ABB=ON (L38 OR L39 OR L40 OR L41 OR L42 OR L43 OR L44 OR
 L45 OR L46 OR L47 OR L48 OR L49 OR L50)
 L52 0 SEA ABB=ON L51 AND (PARTIAL LAYER)
 L53 0 SEA ABB=ON L51 AND (ATTACK####) (3A) (ETCH?)
 L54 36 SEA ABB=ON L51 AND (L04-C12 OR L04-C27 OR U11-C05B9A OR U11-C18C)/MC
 L55 11 SEA ABB=ON L51 AND (?LAYER? OR ?COAT? OR ?FILM? OR ?SURFACE?) (
 3A) (SIDEWALL OR SIDE WALL OR WALL)
 L56 4 SEA ABB=ON L51 AND (DUAL) (2A) (?LAYER? OR ?COAT? OR ?FILM?)
 L57 169 SEA ABB=ON L33 OR L36 OR (L38 OR L39 OR L40 OR L41 OR L42 OR
 L43 OR L44 OR L45 OR L46 OR L47 OR L48 OR L49 OR L50 OR L51 OR
 L52 OR L53 OR L54 OR L55 OR L56)
 L58 150 SEA ABB=ON L37 AND (?LAYER? OR ?FILM? OR ?COAT? OR PASSIVAT###
 ####) (3A) (?TRENCH? OR OPENING OR HOLE OR APERTURE OR INSIDE OR
 SIDEWALL OR SIDE WALL OR WALL)
 L59 3 SEA ABB=ON L37 AND (COATING MATERIALS)
 L60 251 SEA ABB=ON (L51 OR L52 OR L53 OR L54 OR L55 OR L56 OR L57 OR L58 OR L59)
 L61 248 SEA ABB=ON L60 AND P/DT
 L62 3 SEA ABB=ON L60 NOT L61

L63 2 SEA ABB=ON L62 NOT 2003-2010/PY
L64 167 SEA ABB=ON L61 AND 1980-2002/PY, PY
L65 148 SEA ABB=ON L61 AND 2003-2009/PY, PY
L66 100 SEA ABB=ON L61 NOT L65
L67 170 SEA ABB=ON L66 OR L64 OR L63
 D ALL MEMBB 1-170

10/524,610

12/15/09

STN

L67 ANSWER 10 OF 170 COPYRIGHT ACS on STN

AN 1997:88549 HCAPLUS

TI Formation of component isolation regions in semiconductor devices

IN Kuwata, Takaaki

PA Nippon Electric Co, Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08288382	A	19961101	JP 1995-95306	19950420 <--
JP 1995-95306		19950420 <--		

PI JP 08288382 A 19961101 JP 1995-95306 19950420 <--

PRAT JP 1995-95306 19950420 <--

AB The title process involves forming narrow and wide grooves by RIE over a photoresist mask on a Si substrate, depositing an organic polymer on the sidewalls of the grooves, plasma oxidizing to give a Si oxide film on the bottom of the grooves, liquid-phase depositing a Si oxide film on the substrate to fill in over the grooves, removing the deposited surface oxide layer and the photomask, depositing a Si oxide film, and subsequently isotropic wet-etching the surface to expose the substrate for a leveled surface with a fluorocarbon etchant.

ST component isolation region formation semiconductor device

IT Electric insulators

(component isolation; formation of component isolation regions in semiconductor devices)

IT Hydrocarbons, uses

RL: NUU (Other use, unclassified); USES (Uses)

(fluoro, etchant; formation of component isolation regions in semiconductor devices)

IT Etching

(fluorocarbon etchant; formation of component isolation regions in semiconductor devices)

IT Semiconductor devices

(formation of component isolation regions in semiconductor devices)

IT Oxidation

(plasma; formation of component isolation regions in semiconductor devices)

IT 7631-86-9P, Silica, properties

RL: DEV (Device component use); PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation); USES (Uses)

(deposition, insulator; formation of component isolation regions in semiconductor devices)